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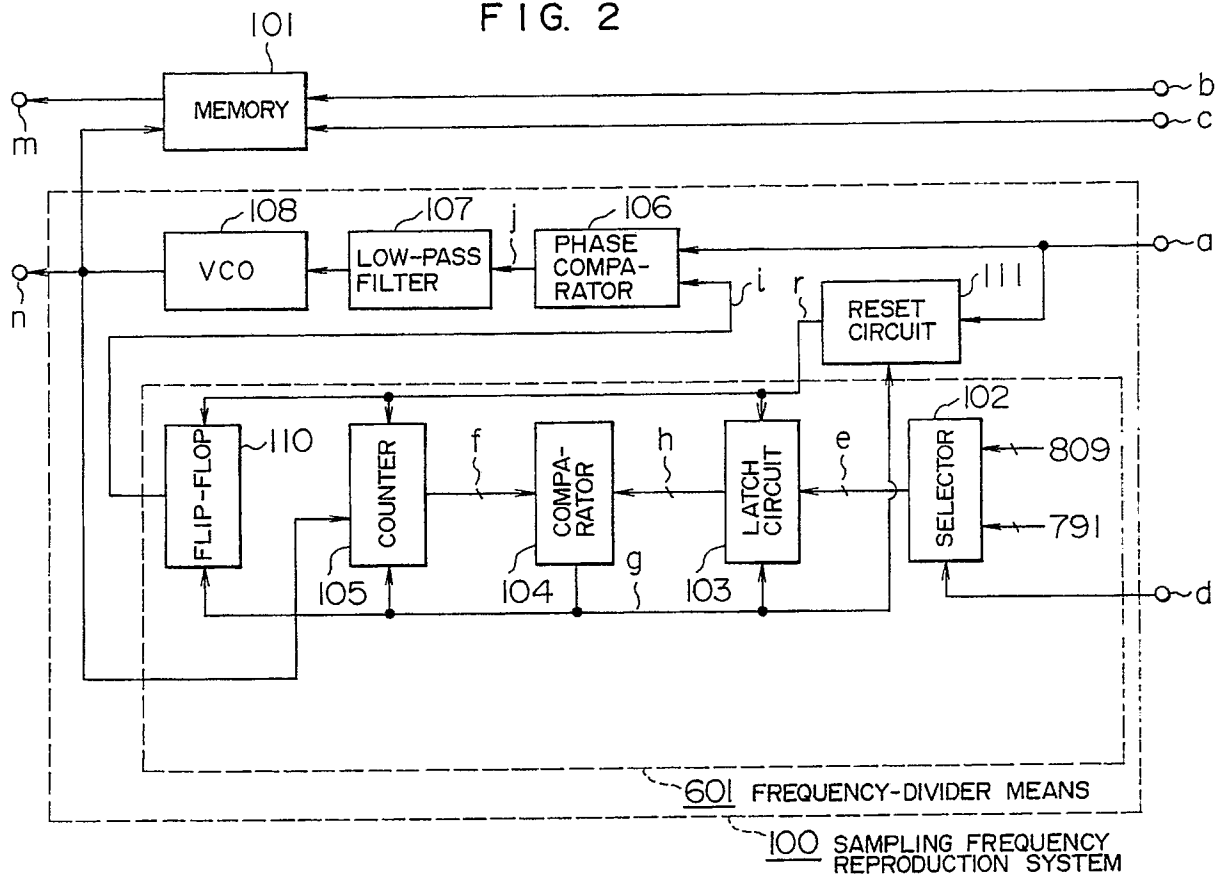
(54) **Sampling frequency reproduction system.**

(57) A phase locked loop is disclosed in which a digital audio signal is recorded in synchronism with a video signal and a sampling frequency of the digital audio signal is reproduced in reproduction mode. The phase locked loop comprises a phase comparator (106), a low-pass filter (107), a VCO (108) and a frequency divider unit (601) which is switched by the number of the digital audio signal recorded for each vertical sync period (or 1/N thereof) of the video signal, so that a sampling frequency of the digital

audio signal having no relationship of integral ratio with a vertical sync frequency Fv of the video signal is reproduced from the same frequency Fv. The reference input to the phase comparator (106) is delayed by a predetermined time in accordance with the number of the digital audio signal, with the result that the sampling frequency reproduced has no period error to the extent that the reference input has no period error.

EP 0 395 347 A3

FIG. 2





DOCUMENTS CONSIDERED TO BE RELEVANT			EP 90304366.9
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ⁸) 5
X	US - A - 4 780 759 (MATSUSHIMA) * Fig. 1; column 3, line 38 - column 4, line 17 *	1	H 04 N 5/00 H 04 N 5/76 H 04 N 5/78 H 04 N 7/06
A	--	2	H 03 L 7/06 H 03 L 7/18
X	WIRELESS WORLD, June 1982, London J.M. BRYANT " Digital frequency syn- thesizer design" pages 62-64,83 * Page 62; fig. 1 *	1	G 11 B 20/10
A	--	2	
X	HORST GESCHWINDE "Einführung in die PLL-Technik", second edition, 1980 Friedrich Vieweg & Sohn, Brunswick/ Wiesbaden pages 3,4 * Page 3; fig. 1 *	1	TECHNICAL FIELDS SEARCHED (Int. Cl. ⁸) 5 H 04 N 5/00 H 04 N 7/00 H 03 L 7/00 G 11 B 20/00
A	----	2	
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 14-12-1990	Examiner BENISCHKA
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐

All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.

☐

Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,

namely claims:

☐

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

X

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,
namely:

1. Claims: 1-4: Sampling frequency reproduction system
2. Claims: 5,6: Method of transmitting a digital audio signal

☐

All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐

Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,

namely claims:

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None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,

namely claims: 1-4